

1 IN THE UNITED STATES DISTRICT COURT FOR THE
 2 NORTHERN DISTRICT OF OKLAHOMA
 3
 4

5 W. A. DREW EDMONDSON, in his)
 6 capacity as ATTORNEY GENERAL)
 7 OF THE STATE OF OKLAHOMA and)
 8 OKLAHOMA SECRETARY OF THE)
 9 ENVIRONMENT C. MILES TOLBERT,))
 10 in his capacity as the)
 11 TRUSTEE FOR NATURAL RESOURCES)
 12 FOR THE STATE OF OKLAHOMA,)

13 Plaintiff,)

14 vs.)

4:05-CV-00329-TCK-SAJ

15 TYSON FOODS, INC., et al,)

16 Defendants.)

17 - - - - -

18 VOLUME I OF THE VIDEOTAPED
 19 DEPOSITION OF DENNIS COOKE, PhD, produced as a
 20 witness on behalf of the Defendants in the above
 21 styled and numbered cause, taken on the 4th day of
 22 December, 2008, in the City of Tulsa, County of
 23 Tulsa, State of Oklahoma, before me, Lisa A.
 24 Steinmeyer, a Certified Shorthand Reporter, duly
 25 certified under and by virtue of the laws of the
 State of Oklahoma.

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1 **A** I recall Mr. Page's instruction, don't delete
2 anything, and I didn't.

3 **Q** Dr. Cooke, do you consider yourself to be a
4 microbiologist?

5 **A** No. 08:49AM

6 **Q** Do you consider yourself to be a toxicologist?

7 **A** Well, if you're asking -- may I ask --
8 understand what this question is about?

9 **Q** Well, you know what a toxicologist is, don't
10 you? 08:50AM

11 **A** I do.

12 **Q** Okay. I mean, do you have any training in
13 that field?

14 **A** I have written substantially about toxicology
15 related to disinfection byproducts, so, yes. 08:50AM

16 **Q** You consider yourself to be an environmental
17 engineer?

18 **A** I have done a lot of work with environmental
19 engineering, so, yes.

20 **Q** Do you consider yourself to be a sanitary
21 engineer? 08:50AM

22 **A** No.

23 **Q** You're not a medical doctor, obviously, are
24 you?

25 **A** No. 08:50AM

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1 21st of 2007 before you started working on THMs
2 again?

3 **A** I don't know. It had to have been shortly
4 thereafter because we had a final report written by
5 the first week or so of January of '08, and this is 01:36PM
6 at the end of September. So somewhere in that next
7 three months and it had to be very shortly because
8 it took a heck of a lot of work to get the THM
9 report done.

10 **Q** Is it your opinion, Dr. Cooke, that there's a 01:36PM
11 problem or will be a problem with disinfection
12 byproducts in the Illinois River watershed or Lake
13 Tenkiller?

14 **A** There currently is a problem, and I think it
15 will get worse as -- unless poultry waste is 01:37PM
16 stopped, it's going to get worse because there's
17 going to be more loading and more algae production,
18 and that's going to create more problems in these
19 water plants, a lot more problems. So, yes, I think
20 it will get worse unless there's a cessation of 01:37PM
21 poultry waste disposal.

22 **Q** Is that the basis for your opinion?

23 **A** I'm sorry?

24 **Q** Let me ask it this way: Did you just state
25 all the opinions you have regarding disinfection 01:37PM

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1 byproducts as they relate to the IRW in Lake
2 Tenkiller?

3 MR. PAGE: Object to the form.

4 Q Is that what you just told me; is that your
5 opinion? 01:37PM

6 A I have more opinions than that.

7 Q Okay. What are the other ones?

8 A I wonder if we could get a structured
9 question; otherwise, I'll start reading the text to
10 you. I don't know what -- 01:37PM

11 Q Have you put all your opinions about DBPs in
12 your written report?

13 A I have. I have stronger opinions now than I
14 had when I wrote the report.

15 Q Why? 01:38PM

16 A More information.

17 Q What information?

18 A Mainly information from the periodical
19 literature, and let me see if I can explain that.
20 When you look at the disinfection byproduct reports 01:38PM
21 that come from ODEQ, what you see is that in various
22 quarters these utilities are in excess, and
23 sometimes 20 or 30 percent of them are way in
24 excess, especially on THMs, and then in a subsequent
25 quarter, their numbers are back down again, and so 01:38PM

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1 the running four-quarter average shows that they're
2 not out of compliance because that's the basis for
3 determining in or out of compliance is the average
4 you have on a running four-quarter basis, but the
5 more I thought about this and began to look at
6 periodical literature in this regard, and we'll be
7 providing you a list of some of those reports if
8 they're not already in here, is that there is a very
9 definite link between drinking water that has
10 disinfection byproducts in it at a level near but
11 below the EPA threshold, a definite link between
12 drinking that water and spontaneous abortions,
13 meaning that this is short-term exposure that would
14 cause that since the gestation time is nine or fewer
15 months for humans, meaning that these one-quarter
16 exceedances might alone be enough to provide that
17 kind of embryo toxic environment.

01:38PM

01:39PM

01:39PM

18 There are not very many people at some of
19 these drinking water plants. They have customers
20 that are less than -- a number of customers less
21 than a thousand, but some of them are quite high,
22 and Tahlequah would be an example of that. So then
23 it -- and I don't have that very statement that I
24 just gave you regarding spontaneous abortions in
25 here. This just took additional thinking and an

01:39PM

01:40PM

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1 additional look at the literature.

2 Q Well, where -- you talking about literature
3 you looked at?

4 A Yes.

5 Q Where is that literature from? 01:40PM

6 A Published -- periodical literature published
7 in peer-reviewed journals.

8 Q What journals?

9 A Epidemiology is a journal. Journal of Public
10 Health. You know, I have these in my briefcase, and 01:40PM
11 that's about the best I can tell you.

12 Q In your briefcase with you today?

13 A They may be there with you. As I said earlier
14 this morning, we'll provide you with a list of the
15 very articles I'm referring to. 01:40PM

16 Q When did you review those things?

17 A In the last month to six weeks.

18 Q Have you turned them over to the lawyers for
19 the State of Oklahoma?

20 A Yes. 01:41PM

21 Q When?

22 A Yesterday.

23 Q What investigations or what investigation have
24 you done, Dr. Cooke, to determine the extent, if
25 any, of spontaneous abortions in the State of 01:41PM

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1 Oklahoma?

2 **A** I have not done any. I don't understand why
3 Oklahoma women would be any different than
4 California and Nova Scotia and some of the other
5 sites where this has been reported. The sample site
6 is so large that I feel it's fair to extrapolate to
7 other humans.

01:41PM

8 **Q** Can you tell me what periodicals or studies
9 that you are referring to?

10 **A** As I mentioned in a previous answer to that
11 question, Epidemiology is one. That's the name of a
12 journal.

01:41PM

13 **Q** What else?

14 **A** I believe the Journal of Public Health but,
15 like I say, if I could say this just one more time,
16 I'll provide you this list. I could do it by
17 tomorrow if you'd like to have it.

01:42PM

18 **Q** Would you agree, Dr. Cooke, that these studies
19 are not all accepted or not accepted in all quarters
20 as being valid?

01:42PM

21 **A** No.

22 **Q** Do you agree or disagree with that?

23 **A** I would disagree with that. I have no
24 information to believe that they're not accepted.

25 **Q** How deep have you dug on that?

01:42PM

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1 **A** I've tried to read as much as I can get, and
2 with my kind of background and the background of any
3 scientist, you look at the sample size and the
4 methods that they used and then see if you agree
5 with the conclusions.

01:42PM

6 **Q** Is it your testimony under oath that you've
7 not seen anything or read anything that indicates
8 there's significant disagreement among the medical
9 research community about this?

10 **A** I have not made this statement. I can find
11 one article that disagrees with that.

01:42PM

12 **Q** What article is that?

13 **A** It's an article written by two individuals,
14 Savitz and Singer.

15 **Q** Who are they?

01:43PM

16 **A** Both of them work I believe at the University
17 of North Carolina. I can't identify their specific
18 departments in that university, but they did a
19 study, a smaller sample size, but their conclusion
20 was that they couldn't find a relationship but their
21 sample size was smaller but, sure, there's that kind
22 of disagreement.

01:43PM

23 **Q** Has the Environmental Protection Agency, Dr.
24 Cooke, altered its DBP thresholds that are allowed
25 as a result of any of these studies that you've

01:43PM

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1 looked at?

2 **A** Not to my knowledge. These studies are new;
3 in some cases they're new. You see, the threshold
4 that we work under with regard to DBPs, all of us,
5 have more to them than just the toxicological impact 01:44PM
6 of DBPs. EPA had to set these on the basis of
7 obtainability relative to cost and to engineering
8 possibilities, and so these numbers, 80 for THM, 60
9 for haloacetic acids are compromises.

10 **Q** Well, we'll come back to that in a minute. Is 01:44PM
11 the State of Oklahoma in your opinion failing to
12 protect its citizens with regard to disinfection
13 byproducts?

14 **A** I think they probably could pay more attention
15 to it. I wouldn't say they are failing. They're 01:44PM
16 following the letter of the law.

17 **Q** But the question is, are they failing to
18 protect its citizens with regard to DBPs? That's
19 the question.

20 **A** I'll have to give you the same answer. 01:44PM
21 They're following the letter of the law and if --
22 the regulation, and if those regulations are failing
23 to protect Oklahomans, then they're failing to
24 protect everybody in the United States.

25 **Q** Have you evaluated the reporting of 01:45PM

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1 trihalomethane concentrations for the IRW water
2 treatment facilities?

3 MR. PAGE: I'll object to the form.

4 A Yes. Have I evaluated them?

5 Q Uh-huh. 01:45PM

6 A I certainly have reported them in a report
7 about them, yes.

8 Q Which facilities have you evaluated?

9 A There's 18 in Oklahoma along the lakeshore and
10 on the river, and we got reports from all of them. 01:45PM

11 Q Who gave you those reports or how did you get
12 your hands on them I guess is my question?

13 A They came from the ODEQ and were obtained for
14 me from Michelle Garber, who is a toxicologist
15 working for Dr. Teaf. 01:46PM

16 Q What did you find in there in those reports?

17 A Well, there were a few utilities, excuse me,
18 that reported no exceedances at all. All of the
19 rest had some exceedances, and some a lot more than
20 others, and so that's how I reported it was by the 01:46PM
21 number of exceedances and near exceedances that each
22 of the utilities had over the span of time that they
23 reported.

24 Q Isn't it true, Dr. Cooke, that you didn't
25 find -- that you found that there were actually very 01:46PM

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1 few problems with THMs in tap water from the lake or
2 the river?

3 A Well, few is certainly a subjective number.
4 In some of the utilities, exceedances over the span
5 of reporting time would be 20 or 30 percent of their 01:47PM
6 reports. I don't call that few. And some of them,
7 I will say, there were very few reports, maybe one
8 or two or zero. That would probably be considered
9 few.

10 Q I'll hand you Defendant's Exhibit No. 12 and 01:47PM
11 ask you to take a moment to look at that, if you
12 would, Doctor.

13 A Okay.

14 Q The bottom of the page there's an E-mail that
15 looks like you wrote to Roger Olsen on September 9th 01:48PM
16 of 2007; is that correct?

17 A Yes.

18 Q And the subject was query about THAA and TTHM;
19 is that right?

20 A Uh-huh. 01:48PM

21 Q Okay. Would you read into the Record the
22 portion that I've highlighted in yellow?

23 A From what little I can see, parenthesis,
24 historical, plus '05, '06, there are few problems
25 with THMs in tap water from the lake or the river. 01:48PM

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1 United States Environmental Protection Agency
2 predict at the standard of 80 micrograms per liter?

3 MR. PAGE: Object to the form.

4 **A** Very difficult question to understand.

5 They're not predicting a health risk at 80 02:07PM

6 micrograms. What they are saying is that
7 disinfection byproducts are strongly associated with
8 certain types of cancers and with embryo toxic
9 effects. So they drew the line at 80 based in part

10 on health risk and based in part on costs and 02:08PM

11 attainability of getting it any better, that is,
12 getting DBPs any lower in finished drinking water.

13 So the number 80 for DBP -- for THMs and 60 for
14 haloacetic acids is essentially a compromise number
15 and is not entirely based upon health risk. 02:08PM

16 **Q** Are you suggesting that the EPS not protecting
17 the health of the citizens of this country?

18 MR. PAGE: Object to the form.

19 **A** Well, off the Record I'd say 100 percent true
20 but that's not -- 02:08PM

21 **Q** Well, you're on the Record.

22 **A** I'm on the Record. Yes, I'll say that now,
23 but that has everything to do with air quality and
24 water quality.

25 **Q** Did you determine, Dr. Cooke, whether the 02:09PM

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